



1) not included in scope of delivery, 2) Distance to tape, 3) Tape, 4) Cable length, 5) Active measurement surface, 6) LED error signal



### Basic features

<b>Additional features 01</b>	Reference signal pole-periodic
<b>Additional features 02</b>	with error signal
<b>Additional features 03</b>	Real-time capable
<b>Application</b>	linear/rotary motion
<b>Approval/Conformity</b>	CE UKCA cURus WEEE
<b>Measuring principle</b>	incremental measuring system
<b>Series</b>	S2C

### Display/Operation

<b>Function indicator</b>	Green LED LED red
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### Electrical connection

<b>Bending radius min., fixed cable</b>	7.5 x D
<b>Bending radius min., flexible cable</b>	15 x D
<b>Cable diameter D</b>	4.9...5.2 mm
<b>Cable length L</b>	5 m, drag chain compatible
<b>Conductor cross-section</b>	0.08 mm <sup>2</sup>
<b>Connection</b>	Cable, 5 m, PUR
<b>Connection type</b>	Cable, 5 m, PUR
<b>Connection version</b>	axial
<b>Number of conductors</b>	12
<b>Polarity reversal protected</b>	no

### Electrical data

<b>Current consumption max. at 5 V DC</b>	100 mA
<b>Operating voltage U<sub>b</sub></b>	4.75...5.25 VDC
<b>Overvoltage protection</b>	no
<b>Switch-on delay max.</b>	500 ms

### Environmental conditions

<b>Altitude max.</b>	2000 m
<b>Ambient temperature</b>	-20...80 °C
<b>Cable temperature, drag chain</b>	-25...85 °C
<b>Cable temperature, fixed routing</b>	-40...85 °C
<b>Cable temperature, flexible routing</b>	-25...85 °C
<b>EN 55016-2-3, Radiation</b>	Industrial areas
<b>EN 60068-2-27, Continuous shock</b>	100 g, 2 ms
<b>EN 60068-2-27, Shock</b>	100 g, 6 ms
<b>EN 60068-2-6, Vibration</b>	12 g, 10...2000 Hz
<b>EN 61000-4-2, ESD</b>	Severity Level 3
<b>EN 61000-4-3, RFI</b>	Severity Level 2
<b>EN 61000-4-4, Burst</b>	Severity Level 3
<b>EN 61000-4-5, Surge</b>	Severity Level 2
<b>EN 61000-4-6, High-frequency fields</b>	Severity Level 3
<b>EN 61000-4-8 Magnetic fields</b>	Severity Level 4
<b>Ext. magnetic fields max., in operation</b>	1 mT (no effect)
<b>IP rating</b>	IP67
<b>Overall system temperature coefficient</b>	10.5 ppm/K
<b>Relative humidity</b>	≤ 90 %, non-condensing
<b>Storage temperature</b>	-30...85 °C

Magnetically Coded Sensors  
**BML-S2C0-Q61L-M624-K0-KA05**  
**Order Code: BML06C0**

**BALLUFF**

**Functional safety**

MTTF (40 °C) 1409 a

**Interface**

Differential signals yes  
 Error signal yes  
 Interface Digital A/B (RS422)  
 Reference signal Pole-periodic  
 Signal sequence A before B = rising

**Material**

Cable flame-resistant UL94 V0 and IEC 60332/2  
 Housing material PBT  
 Material jacket PUR

**Mechanical data**

Dimension 10 x 25 x 35 mm  
 Lateral offset (Y) ±4 mm  
 Mounting part Through-hole 3.5 mm  
 Pitch max. ±1.0 °  
 Pole width 10 mm  
 Procedure direction Lengthwise to tape  
 Roll max. ±3.0 °  
 Weight 11 g (excluding cable)  
 Yaw max. ± 3.0 °

**Range/Distance**

Edge separation min. 4 µs  
 Interpolation factor 100  
 Non-linearity max. ±400 µm (z=1...5 mm, y=±2 mm)  
 Non-linearity typ. ±550 µm (z=0.01...6.5mm, y=±4mm)  
 Read distance 0.01...6.5 mm  
 Repeat accuracy ≤ 100 µm  
 Resolution 100 µm (edge separation A/B)  
 Traverse speed max. 10 m/s

**Wiring Diagrams**

Color	
WH	+A
BN	-A
GN	+B
YE	-B
GY	+Z
PK	-Z

Color	
BU	GND
RD	U <sub>B</sub>
BK	GND Sense
VT	U <sub>B</sub> Sense
GY-PK	+Nerror
RD-BU	-Nerror
TR	PE